

Customer Number: 000959

Attorney's
Docket
Number MNI-134CP2

Declaration, Petition and Power of Attorney for Patent Application

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

32142, 21481, 25964, 21686, NOVEL DEHYDROGENASE MOLECULES AND USES THEREFOR

the specification of which

(check one)

 is attached hereto.

X was filed on April 18, 2001 as

Application Serial No. 09/838,561

and was amended on _____
(if applicable)

I do not know and do not believe that the subject matter of this application was known or used by others in the United States or patented or described in a printed publication in any country before my invention thereof, or patented or described in a printed publication in any country or in public use or on sale in the United States more than one year prior to the date of this application, or first patented or caused to be patented or made the subject of an inventor's certificate by me or my legal representatives or assigns in a country foreign to the United States prior to the date of this application on an application filed more than twelve months (six months if this application is for a design) before the filing of this application; and I acknowledge my duty to disclose information of which I am aware which is material to the examination of this application, that no application for patent or inventor's certificate on the subject matter of this application has been filed by me or my representatives or assigns in any country foreign to the United States, except those identified below, and that I have reviewed and understand the contents of the specification, including the claims as amended by any amendment referred to herein.

I acknowledge the duty to disclose to the Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

CLAIM OF BENEFIT OF EARLIER FOREIGN APPLICATION(S)

I hereby claim priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below, and have also identified below any foreign application(s) for patent or inventor's certificate filed by me on the same subject matter having a filing date before that of the application(s) from which priority is claimed.

Check one:

☒ no such applications have been filed.

☐ such applications have been filed as follows

EARLIEST FOREIGN APPLICATION(S), IF ANY, FILED WITHIN 12 MONTHS
(6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION

Country	Application Number	Date of Filing (month,day,year)	Priority Claimed Under 35 USC 119
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
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ALL FOREIGN APPLICATION(S), IF ANY FILED MORE THAN 12 MONTHS
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CLAIM FOR BENEFIT OF U.S. PROVISIONAL APPLICATION(S)

I hereby claim the benefit under 35 U.S.C. §119(e) of any United States provisional application(s) listed below.

60/192,002
(Application Serial No.)

March 24, 2000
(Filing Date)

(Application Serial No.)

(Filing Date)

CLAIM FOR BENEFIT OF EARLIER U.S./PCT APPLICATION(S)

I hereby claim the benefit under Title 35, United States Code, §120 of any earlier United States application(s) or PCT international application(s) designating the United States listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the earlier application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose to the Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date(s) of the earlier application(s) and the national or PCT international filing date of this application. As to subject matter of this application which is common to my earlier application(s), if any, described below, I do not know and do not believe that the same was known or used by others in the United States or patented or described in a printed publication in any country before my invention thereof, or patented or described in a printed publication in any country or in public use or on sale in the United States more than one year prior to the date(s) of said earlier application(s), or first patented or caused to be patented or made the subject of an inventor's certificate by me or my legal representatives or assigns in a country foreign to the United States prior to the date(s) of said earlier application(s) on an application filed more than twelve months (six months if this application is for a design) before the filing of said earlier application(s); and I acknowledge that no application for patent or inventor's certificate on said subject matter has been filed by me or my representatives or assigns in any country foreign to the United States except those identified herein.

09/634,955
(Application Serial No.)

August 8, 2000
(Filing Date)

(Status)
(patented,pending,aband.)

09/816,760
(Application Serial No.)

March 23, 2001
(Filing Date)

(Status)
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James E. Cockfield	Reg. No. 19,162	Peter C. Lauro	Reg. No. 32,360
Thomas V. Smurzynski	Reg. No. 24,798	DeAnn F. Smith	Reg. No. 36,683
Ralph A. Loren	Reg. No. 29,325	David J. Ridders	Reg. No. 43,882
Giulio A. DeConti, Jr.	Reg. No. 31,503	Maria C. Laccotripe	Limited Recognition
Ann Lamport Hammitte	Reg. No. 34,858		Under 37 C.F.R. § 10.9(b)
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Jane E. Remillard	Reg. No. 38,872	Peter S. Stecher	Reg. No. 47,259
Jeremiah Lynch	Reg. No. 17,425	Cynthia L. Kanik	Reg. No. 37,320
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Nicholas P. Triano III	Reg. No. 36,397		

all of: LAHIVE & COCKFIELD, LLP, 28 State Street, Boston, MA 02109

and to: Jean M. Silveri	Reg. No. 39,030	Mark F. Boshar	Reg. No. 35,456
Theodore Allen	Reg. No. 41,578	Scott A. Brown	Reg. No. 32,724
Jill E. Uhl	Reg. No. 43,213	George C. Jen	Reg. No. 39,239
Susan M. Perkins	Reg. No. 36,405		

of: Millennium Pharmaceuticals, Inc., 75 Sidney Street, Cambridge, MA 02139

Send Correspondence to Amy E. Mandragouras, Esq. at Customer Number: 000959 whose address is:

Lahive & Cockfield, LLP, 28 State Street, Boston, MA 02109

Direct Telephone Calls to: (name and telephone number)

Amy E. Mandragouras, Esq., (617) 227-7400

Wherefore I petition that letters patent be granted to me for the invention or discovery described and claimed in the attached specification and claims, and hereby subscribe my name to said specification and claims and to the foregoing declaration, power of attorney, and this petition.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of first inventor Rachel Meyers	
Inventor's signature X <i>Rachel Meyers</i>	Date X 10/5/01
Residence 115 Devonshire Road Newton, MA 02468	
Citizenship U.S.A.	
Post Office Address (if different)	

Full name of second inventor William James Cook	
Inventor's signature	Date
Residence 22 Reynolds Avenue Natick, MA 01760	
Citizenship U.S.A.	
Post Office Address (if different)	

Full name of third inventor, if any Mark Williamson	
Inventor's signature	Date
Residence 15 Stonecrest Drive Saugus, MA 01906	
Citizenship U.S.A.	
Post Office Address (if different)	

Full name of fourth inventor, if any Laura A. Rudolph-Owen	
Inventor's signature	Date
Residence 186 Arborway, #1, Jamaica Plain, MA 02130	
Citizenship U.S.A.	
Post Office Address (if different)	

Full name of sole or first inventor Ruth Gimeno	
Inventor's signature	Date
Residence 250 Commonwealth Avenue, Apt. No. 23, Boston, Massachusetts 02116	
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Inventor's signature	Date
Residence 115 Devonshire Road Newton, MA 02468	
Citizenship U.S.A.	
Post Office Address (if different)	

Full name of second inventor William James Cook	
Inventor's signature X <i>William James Cook</i>	Date X 10/9/01
Residence 22 Reynolds Avenue Natick, MA 01760 245 Messer Hill Rd. New London, NH 03257	
Citizenship U.S.A.	
Post Office Address (if different)	

Full name of third inventor, if any Mark Williamson	
Inventor's signature	Date
Residence 15 Stonecrest Drive Saugus, MA 01906	
Citizenship U.S.A.	
Post Office Address (if different)	

Full name of fourth inventor, if any Laura A. Rudolph-Owen	
Inventor's signature	Date
Residence 186 Arborway, #1, Jamaica Plain, MA 02130	
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Full name of sole or first inventor Ruth Gimeno	
Inventor's signature	Date
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(Application Serial No.)

March 24, 2000

(Filing Date)

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60/192,002

(Application Serial No.)

March 24, 2000

(Filing Date)

EXAMINE FOREIGN APPLICATION(S) IF ANY FILED WITHIN 12 MONTHS
(6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION

Country	Application Number	Date of Filing	Priority Claimed
			Yes No
			Yes No
			Yes No
			Yes No

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POWER OF ATTORNEY: I, the undersigned, do hereby authorize the following person to act as my agent in the Patent and Trademark Office:

Full name of first inventor	Rachael Meyers	
Inventor's signature	<i>Rachael Meyers</i>	Date 10.30.01
Residence	115 Devonshire Road Newton, MA 02468	
Citizenship	U.S.A.	
Post Office Address (if different)	33,470	

Full name of second inventor	William James Cook	
Inventor's signature	<i>William James Cook</i>	Date 10.30.01
Residence	22 Reynolds Avenue Natick, MA 01760	
Citizenship	U.S.A.	
Post Office Address (if different)	Mandagouras, Reg. at Customer Number: 000959	

Full name of third inventor, if any	Mark Williamson	
Inventor's signature	<i>Mark Williamson</i>	Date 10.4.01
Residence	15 Stonecrest Drive Saugus, MA 01906	
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and was amended on _____
(if applicable)

I do not know and do not believe that the subject matter of this application was known or used by others in the United States or patented or described in a printed publication in any country before my invention thereof, or patented or described in a printed publication in any country or in public use or on sale in the United States more than one year prior to the date of this application, or first patented or caused to be patented or made the subject of an inventor's certificate by me or my legal representatives or assigns in a country foreign to the United States prior to the date of this application on an application filed more than twelve months (six months if this application is for a design) before the filing of this application; and I acknowledge my duty to disclose information of which I am aware which is material to the examination of this application, that no application for patent or inventor's certificate on the subject matter of this application has been filed by me or my representatives or assigns in any country foreign to the United States, except those identified below, and that I have reviewed and understand the contents of the specification, including the claims as amended by any amendment referred to herein.

I acknowledge the duty to disclose to the Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

CLAIM OF BENEFIT OF EARLIER FOREIGN APPLICATION(S)

I hereby claim priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below, and have also identified below any foreign application(s) for patent or inventor's certificate filed by me on the same subject matter having a filing date before that of the application(s) from which priority is claimed.

Check one: ☐ Pending ☐ Final

X no such applications have been filed.

Any such applications have been filed as follows

EARLIEST FOREIGN APPLICATION(S), IF ANY, FILED WITHIN 12 MONTHS
first (6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION or which

Country	Application Number	Date of Filing (month,day,year)	Priority Claimed Under 35 USC 119
			_ Yes No _
			_ Yes No _
			_ Yes No _
			_ Yes No _
X was filed on Apr. 18, 2001			_ Yes No _

ALL FOREIGN APPLICATION(S), IF ANY FILED MORE THAN 12 MONTHS
(6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION

(6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION:	
1. TITLE OF INVENTION:	
2. NAME OF APPLICANT:	
3. NAME OF INVENTOR:	
4. ADDRESS OF APPLICANT:	
5. ADDRESS OF INVENTOR:	

[illegible]

Nothing is to be disclosed to the public if the information known to me is to be held in confidence by the Government in Title 37, U.S.C. 1714 and the Regulations thereunder.

CLAIM FOR BENEFIT OF U.S. PROVISIONAL APPLICATION(S)

I hereby claim the benefit under 35 U.S.C. §119(e) of any United States provisional application(s) listed below.

60/192,002
(Application Serial No.)

March 24, 2000
(Filing Date)

(Application Serial No.)

(Filing Date)

ALL FOREIGN APPLICANTS MUST BE AT LEAST 18 YEARS OF AGE AND HAVE BEEN RESIDENT IN THE UNITED STATES FOR AT LEAST 6 MONTHS PRIOR TO THE DATE OF APPLICATION.

CLAIM FOR BENEFIT OF EARLIER U.S./PCT APPLICATION(S)

I hereby claim the benefit under Title 35, United States Code, §120 of any earlier United States application(s) or PCT international application(s) designating the United States listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the earlier application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose to the Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date(s) of the earlier application(s) and the national or PCT international filing date of this application. As to subject matter of this application which is common to my earlier application(s), if any, described below, I do not know and do not believe that the same was known or used by others in the United States or patented or described in a printed publication in any country before my invention thereof, or patented or described in a printed publication in any country or in public use or on sale in the United States more than one year prior to the date(s) of said earlier application(s), or first patented or caused to be patented or made the subject of an inventor's certificate by me or my legal representatives or assigns in a country foreign to the United States prior to the date(s) of said earlier application(s) on an application filed more than twelve months (six months if this application is for a design) before the filing of said earlier application(s); and I acknowledge that no application for patent or inventor's certificate on said subject matter has been filed by me or my representatives or assigns in any country foreign to the United States except those identified herein.

09/634,955
(Application Serial No.)

August 8, 2000
(Filing Date)

(Status)
(patented, pending, aband.)

09/816,760
(Application Serial No.)

March 23, 2001
(Filing Date)

(Status)
(patented, pending, aband.)

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorneys and/or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

James E. Cockfield Reg. No. 19,162
 Thomas V. Smurzynski Reg. No. 24,798
 Ralph A. Loren Reg. No. 29,325
 Giulio A. DeConti, Jr. Reg. No. 31,503
 Ann Lamport Hammitte Reg. No. 34,858
 Elizabeth A. Hanley Reg. No. 33,505
 Amy E. Mandragouras Reg. No. 36,207
 Anthony A. Laurentano Reg. No. 38,220
 Jane E. Remillard Reg. No. 38,872
 Jeremiah Lynch Reg. No. 17,425
 Kevin J. Canning Reg. No. 35,470
 Jeanne M. DiGiorgio Reg. No. 41,710
 Megan E. Williams Reg. No. 43,270
 Nicholas P. Triano III Reg. No. 36,397

Peter C. Lauro Reg. No. 32,360
 DeAnn F. Smith Reg. No. 36,683
 David J. Ridders Reg. No. 43,882
 Maria C. Laccotripe Limited Recognition
 Under 37 C.F.R. § 10.9(b)
 Debra J. Milasincic Reg. No. 46,931
 David R. Burns Reg. No. 46,590
 Sean D. Detweiler Reg. No. 42,482
 Peter S. Stecher Reg. No. 47,259
 Cynthia L. Kanik Reg. No. 37,320

all of: **LAHIVE & COCKFIELD, LLP, 28 State Street, Boston, MA 02109**

and to: Jean M. Silveri Reg. No. 39,030
 Theodore Allen Reg. No. 41,578
 Jill E. Uhl Reg. No. 43,213
 Susan M. Perkins Reg. No. 36,405
 Mark F. Boshar Reg. No. 35,456
 Scott A. Brown Reg. No. 32,724
 George C. Jen Reg. No. 39,239

of: **Millennium Pharmaceuticals, Inc., 75 Sidney Street, Cambridge, MA 02139**

(Application Serial No.) (Filing Date) (Status)
 Send Correspondence to Amy E. Mandragouras, Esq. at **Customer Number: 000959** whose address is:

Lahive & Cockfield, LLP, 28 State Street, Boston, MA 02109

Direct Telephone Calls to: (name and telephone number)

Amy E. Mandragouras, Esq., (617) 227-7400

Wherefore I petition that letters patent be granted to me for the invention or discovery described and claimed in the attached specification and claims, and hereby subscribe my name to said specification and claims and to the foregoing declaration, power of attorney, and this petition.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: I, the undersigned, do hereby appoint the following attorneys in law to represent me and to conduct all business in the name and on behalf of the undersigned.

Full name of first inventor	Rachel Meyers		
Inventor's signature	Reg. No. 33,553	Date	Reg. No. 33,553
Residence	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
115 Devonshire Road	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Newton, MA 02468	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Citizenship	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
U.S.A.	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Post Office Address (if different)	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553

Full name of second inventor	William James Cook		
Inventor's signature	Reg. No. 33,553	Date	Reg. No. 33,553
Residence	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
22 Reynolds Avenue	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Natick, MA 01760	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Citizenship	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
U.S.A.	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Post Office Address (if different)	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553

James A. Cook, 22 Reynolds Avenue, Natick, MA 01760

Full name of third inventor, if any	Mark Williamson		
Inventor's signature	Reg. No. 33,553	Date	Reg. No. 33,553
Residence	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
15 Stonecrest Drive	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Saugus, MA 01906	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Citizenship	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
U.S.A.	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Post Office Address (if different)	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553
Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553	Reg. No. 33,553

Full name of fourth inventor, if any Laura A. Rudolph-Owen	
Inventor's signature <i>X Laura Rudolph-Owen</i>	Date <i>X 10/3/01</i>
Residence 1186 Arborway, #1, Jamaica Plain, MA 02130	
Citizenship U.S.A. MA 02130	
Post Office Address (if different) Post Office Address (if different)	

Full name of sole or first inventor Ruth Gimeno - second inventor	
Inventor's signature <i>Ruth Gimeno</i>	Date
Residence 250 Commonwealth Avenue, Apt. No. 23, Boston, Massachusetts 02116	
Citizenship U.S.A. MA 02116	
Post Office Address (if different) Post Office Address (if different)	

Full name of fourth inventor, if any April A. H. [illegible]	
Residence 15 [illegible] [illegible]	
Citizenship U.S.A. [illegible]	
Post Office Address (if different) Post Office Address (if different)	

Customer Number: 000959

Attorney's
Docket
Number MNI-134CP2

Inventor

Declaration, Petition and Power of Attorney for Patent Application

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,
Post Office Address (if other than residence)

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

32142, 21481, 25964, 21686, NOVEL DEHYDROGENASE MOLECULES AND USES THEREFOR
the specification of which

(check one)

250 Commonwealth Avenue, Apt. No. 23, Boston, Massachusetts 02116

is attached hereto.

U.S.A.

X was filed on April 18, 2001 as

Application Serial No. 09/838,561

and was amended on _____
(if applicable)

I do not know and do not believe that the subject matter of this application was known or used by others in the United States or patented or described in a printed publication in any country before my invention thereof, or patented or described in a printed publication in any country or in public use or on sale in the United States more than one year prior to the date of this application, or first patented or caused to be patented or made the subject of an inventor's certificate by me or my legal representatives or assigns in a country foreign to the United States prior to the date of this application on an application filed more than twelve months (six months if this application is for a design) before the filing of this application; and I acknowledge my duty to disclose information of which I am aware which is material to the examination of this application, that no application for patent or inventor's certificate on the subject matter of this application has been filed by me or my representatives or assigns in any country foreign to the United States, except those identified below, and that I have reviewed and understand the contents of the specification, including the claims as amended by any amendment referred to herein.

I acknowledge the duty to disclose to the Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

CLAIM OF BENEFIT OF EARLIER FOREIGN APPLICATION(S)

I hereby claim priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below, and have also identified below any foreign application(s) for patent or inventor's certificate filed by me on the same subject matter having a filing date before that of the application(s) from which priority is claimed.

Check one: ☐ Application, ☐ Renewal, ☐ Other

As X no such applications have been filed. b6 b7C

such applications have been filed as follows are as stated by the respondent:

1. EARLIEST FOREIGN APPLICATION(S), IF ANY, FILED WITHIN 12 MONTHS
 2. (6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION

Country	Application Number	Date of Filing (month,day,year)	Priority Claimed Under 35 USC 119
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
X was filed on April 18, 2001		as	<input type="checkbox"/> Yes <input type="checkbox"/> No

ALL FOREIGN APPLICATION(S), IF ANY FILED MORE THAN 12 MONTHS
(6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION

and was amended on _____

I, _____, of the _____, do hereby certify that the foregoing is a true and correct copy of the _____, as the same appears from the _____, and that the same has been compared with the original and found to be a true and correct copy thereof.

I acknowledge the duty to disclose to the Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

CLAIM FOR BENEFIT OF U.S. PROVISIONAL APPLICATION(S)

I hereby claim the benefit under 35 U.S.C. §119(e) of any United States provisional application(s) listed below.
 matter has been previously filed in the United States Code, 119 of any United States provisional application(s) listed below.

60/192,002

(Application Serial No.)

March 24, 2000

(Filing Date)

☒ This application has been previously filed

Other applications have been filed as follows:

(Application Serial No.)

(Filing Date)

ALL FOREIGN APPLICATION(S), IF ANY, FILED WITHIN 12 MONTHS
 (6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION

COUNTRY	Application Number	Date of Filing (Month/Day/Year)	Priority Claimed 35 U.S.C. 119
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No

ALL FOREIGN APPLICATION(S), IF ANY FILED MORE THAN 12 MONTHS
 (6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION

CLAIM FOR BENEFIT OF EARLIER U.S./PCT APPLICATION(S)

I hereby claim the benefit under Title 35, United States Code, §120 of any earlier United States application(s) or PCT international application(s) designating the United States listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the earlier application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112; I acknowledge the duty to disclose to the Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date(s) of the earlier application(s) and the national or PCT international filing date of this application. As to subject matter of this application which is common to my earlier application(s), if any, described below, I do not know and do not believe that the same was known or used by others in the United States or patented or described in a printed publication in any country before my invention thereof, or patented or described in a printed publication in any country or in public use or on sale in the United States more than one year prior to the date(s) of said earlier application(s), or first patented or caused to be patented or made the subject of an inventor's certificate by me or my legal representatives or assigns in a country foreign to the United States prior to the date(s) of said earlier application(s) on an application filed more than twelve months (six months if this application is for a design) before the filing of said earlier application(s); and I acknowledge that no application for patent or inventor's certificate on said subject matter has been filed by me or my representatives or assigns in any country foreign to the United States except those identified herein.

09/634,955
(Application Serial No.)

August 8, 2000
(Filing Date)

(Status)
(patented,pending,aband.)

09/816,760
(Application Serial No.)

March 23, 2001
(Filing Date)

(Status)
(patented,pending,aband.)

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorneys and/or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

James E. Cockfield	Reg. No. 19,162	Peter C. Lauro	Reg. No. 32,360
Thomas V. Smurzynski	Reg. No. 24,798	DeAnn F. Smith	Reg. No. 36,683
Ralph A. Loren	Reg. No. 29,325	David J. Ridders	Reg. No. 43,882
Giulio A. DeConti, Jr.	Reg. No. 31,503	Maria C. Laccotripe	Limited Recognition
Ann Lamport Hammitte	Reg. No. 34,858		Under 37 C.F.R. § 10.9(b)
Elizabeth A. Hanley	Reg. No. 33,505	Debra J. Milasincic	Reg. No. 46,931
Amy E. Mandragouras	Reg. No. 36,207	David R. Burns	Reg. No. 46,590
Anthony A. Laurentano	Reg. No. 38,220	Sean D. Detweiler	Reg. No. 42,482
Jane E. Remillard	Reg. No. 38,872	Peter S. Stecher	Reg. No. 47,259
Jeremiah Lynch	Reg. No. 17,425	Cynthia L. Kanik	Reg. No. 37,320
Kevin J. Canning	Reg. No. 35,470		
Jeanne M. DiGiorgio	Reg. No. 41,710		
Megan E. Williams	Reg. No. 43,270		
Nicholas P. Triano III	Reg. No. 36,397		

and to: Jean M. Silveri Reg. No. 39,030 Mark F. Boshar Reg. No. 35,456
 Theodore Allen Reg. No. 41,578 Scott A. Brown Reg. No. 32,724
 Jill E. Uhl Reg. No. 43,213 George C. Jen Reg. No. 39,239
 Susan M. Perkins Reg. No. 36,405

of Millennium Pharmaceuticals, Inc., 75 Sidney Street, Cambridge, MA 02139

Send Correspondence to Amy E. Mandragouras, Esq. at Customer Number: **000959** whose address is:

Lahive & Cockfield, LLP, 28 State Street, Boston, MA 02109

Direct Telephone Calls to: (name and telephone number)

Amy E. Mandragouras, Esq., (617) 227-7400

Wherefore I petition that letters patent be granted to me for the invention or discovery described and claimed in the attached specification and claims, and hereby subscribe my name to said specification and claims and to the foregoing declaration, power of attorney, and this petition.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of first inventor	Rachel Meyers	Reg. No. 36,146	Date	11/15/2000
Inventor's signature	David R. Dwyer	Reg. No. 36,145	Date	11/15/2000
Residence	115 Devonshire Road Newton, MA 02468	Reg. No. 36,145	Date	11/15/2000
Citizenship	U.S.A.	Reg. No. 36,145	Date	11/15/2000
Post Office Address (if different)	Jeanne M. DiGiorgio	Reg. No. 36,145	Date	11/15/2000
	Megan R. Williams	Reg. No. 36,145	Date	11/15/2000
	Nicholas P. Triolo III	Reg. No. 36,145	Date	11/15/2000

Full name of second inventor William James Cook			
Inventor's signature Theodore A. Uhl	Reg. No. 39,030	Mark E. Host	Date Reg. No. 35,456
Residence 22 Reynolds Avenue Natick, MA 01760	Reg. No. 41,578	Scott C. Brown	Reg. No. 37,724
Citizenship U.S.A.	Reg. No. 43,213	George C. Ten	Reg. No. 39,229
Post Office Address (if different) address is:			

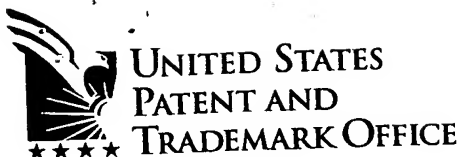
Full name of third inventor, if any and telephone number	Mark Williamson
Inventor's signature	Date
Residence	15 Stonecrest Drive Saugus, MA 01906
Citizenship	U.S.A.
Post Office Address (if different)	

- 6 -

Full name of fourth inventor, if any	
Laura A. Rudolph-Owen	
Inventor's signature	Date
Residence	
186 Arborway, #1, Jamaica Plain, MA 02130	
Citizenship	
U.S.A.	
Post Office Address (if different)	
Post Office Address (if different)	

Full name of sole or first inventor	
Ruth Gimeno	
Inventor's signature	Date
X <i>Ruth Gimeno</i>	X 10/3/01
Residence	
65 BEVERLY RD, WELLESLEY, MA 02481	
250 Commonwealth Avenue, Apt. No. 23, Boston, Massachusetts 02116	
Citizenship	
U.S.A. - GERMANY	
Post Office Address (if different)	
U.S.A.	
Post Office Address (if different)	

Full name of third inventor, if any	
Mark W. Owen	
Inventor's signature	
Residence	
13 Street	
Post Office Address (if different)	
Post Office Address (if different)	



MAY 31, 2002

PTAS

Commissioner for Trademarks
Arlington, VA 22202-3513
www.uspto.gov

LAHIVE & COCKFIELD, LLP
AMY E. MANDRAGOURAS, ESQ.
28 STATE STREET
BOSTON, M.A. 02109



102046442A

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 03/25/2002

REEL/FRAME: 012748/0645
NUMBER OF PAGES: 16

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
MEYERS, RACHEL

DOC DATE: 10/05/2001

ASSIGNOR:
COOK, WILLIAM JAMES

DOC DATE: 01/04/2002

ASSIGNOR:
WILLIAMSON, MARK

DOC DATE: 01/04/2002

ASSIGNOR:
RUDOLPH-OWEN, LAURA A.

DOC DATE: 10/03/2001

ASSIGNOR:
GIMENO, RUTH

DOC DATE: 10/03/2001

ASSIGNEE:
MILLENNIUM PHARMACEUTICALS, INC.
75 SIDNEY STREET
CAMBRIDGE, MASSACHUSETTS 02139

012748/0645 PAGE 2

SERIAL NUMBER: 09838561
PATENT NUMBER:

FILING DATE: 04/18/2001
ISSUE DATE:

MARCUS KIRK, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

FORM PTO-1595

(Rev. 6-93)
OMB No. 0651-0011 (exp. 4/94)

04-08-2002

SHEET

U.S. DEPARTMENT OF
COMMERCE
Patent and Trademark Office

Tab settings ⇄⇄⇄▽

To the Honorable Commissioner

102046442

▽ MNI-134CP2

Attached original documents or copy thereof.

1. Name of conveying party(ies):

- 1) Rachel Meyers
- 2) William James Cook
- 3) Mark Williamson
- 4) Laura A. Rudolph-Owen
- 5) Ruth Gimeno

3-25-02

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance

- ☒ Assignment ☐ Merger
- ☐ Security Agreement ☐ Change of Name
- ☐ Other _____

Execution Dates: 1) October 5, 2001; 2) January 4, 2002; 3) October 4, 2001; 4) October 3, 2001; and 5) October 3, 2001

2. Name and address of receiving party(ies)

Name: Millennium Pharmaceuticals, Inc.

Internal Address: _____

Street Address: 75 Sidney StreetCity: Cambridge State: Massachusetts
ZIP: 02139Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)
09/838,561

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Amy E. Mandragouras, Esq.Internal Address: Lahive & Cockfield, LLPStreet Address: 28 State StreetCity: Boston State: MA ZIP: 02109

6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 3.41).....\$ \$40.00☒ Enclosed☐ Authorized to be charged to deposit account

8. Deposit account number:

12-0080 (deficiency only)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Maria C. Laccotripe, Ph.D.
Limited Recognition Under CFR §10.9(b)
Name of Person SigningMarch 15, 2002
Date

Total number of pages including cover sheet, attachments, and document:

16

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents and Trademarks
Box Assignment
Washington, D.C. 20231

04/2002 INUELLER 00000085 09838561

FD-581

40.00 OP

OFFICE OF PUBLIC RECORDS
2002 MAR 25 PM 2:08
FINANCE SECTION

ASSIGNMENT

We, Rachel Meyers of Newton, MA, William James Cook of Natick, MA, Mark Williamson of Saugus, MA, Laura A. Rudolph-Owen of Jamaica Plain, MA, and Ruth Gimeno of Boston, MA, in consideration of One Dollar and other valuable consideration paid to us by

Millennium Pharmaceuticals, Inc.

a corporation of Delaware, having its principal place of business at 75 Sidney Street, Cambridge, MA, 02139, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

Millennium Pharmaceuticals, Inc.

its successors and assigns, the entire interest for the United States of America and all foreign countries including all rights of priority under the International Convention for the Protection of Industrial Property in a certain invention or improvement in

32142, 21481, 25964, 21686, NOVEL DEHYDROGENASE MOLECULES AND USES
THEREFOR

described in an application

☐ executed by us of even date herewith and about to be filed

☒ Serial No. 09/838,561, filed on April 18, 2001

in the United States Patent and Trademark Office, and in all Letters Patent of the United States and all foreign countries which may or shall be granted on said invention, or any parts thereof, or on said application, or any divisional, continuing, reissue or other applications based in whole or in part thereon. And we agree, for ourselves and our executors and administrators, with said corporation and its successors and assigns but at its or their expense and charges, hereafter to execute all applications, amended specifications, deed or other instrument, and to do all acts necessary or proper to secure the grant of Letters Patent in the United States and in all other countries to said corporation, with specifications and claims in such form as shall be approved by the counsel of said corporation and to vest and confirm in said corporation, its successors and assigns, the legal title to all such patents.

And we do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said corporation, its successors and assigns.

WITNESS my hand and seal this 5 day of Oct, 2001.

By: X Rachel Meyers
Rachel Meyers

State of Massachusetts)
)ss
County of Middlesex)

Then personally appeared the above named Rachel Meyers and acknowledged the foregoing instrument to be his/her free act and deed, before me, this 5th day of October, 2001.

Ann Sherry
Notary Public (ANN SHERRY)
My Commission Expires 4/19/07

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
William James Cook

State of Massachusetts)
)ss
County of)

Then personally appeared the above named William James Cook and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Mark Williamson

State of Massachusetts)
)ss
County of)

Then personally appeared the above named Mark Williamson and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Laura A. Rudolph-Owen

State of Massachusetts)
)ss
County of)

Then personally appeared the above named Laura A. Rudolph-Owen and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Ruth Gimeno

State of Massachusetts)
)ss
County of)

Then personally appeared the above named Ruth Gimeno and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____

ASSIGNMENT

M. W. WILLIAMSON HPI 2000-07901R1CP

We, Rachel Meyers of Newton, MA, William James Cook of Natick, MA, Mark Williamson of Saugus, MA, Laura A. Rudolph-Owen of Jamaica Plain, MA, and Ruth Gimeno of Boston, MA, in consideration of One Dollar and other valuable consideration paid to us by

Millennium Pharmaceuticals, Inc.

a corporation of Delaware, having its principal place of business at 75 Sidney Street, Cambridge, MA, 02139, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

Millennium Pharmaceuticals, Inc.

its successors and assigns, the entire interest for the United States of America and all foreign countries including all rights of priority under the International Convention for the Protection of Industrial Property in a certain invention or improvement in

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☒ Serial No. 09/838,561, filed on April 18, 2001

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And we do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said corporation, its successors and assigns.

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Rachel Meyers

State of Massachusetts)
)ss
County of)

Then personally appeared the above named Rachel Meyers and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
William James Cook

State of Massachusetts)
)ss
County of _____)

Then personally appeared the above named William James Cook and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____

WITNESS my hand and seal this 4th day of October, 2001.

By: X Mark Williamson
Mark Williamson

State of Massachusetts)
)ss
County of Middlesex)

Then personally appeared the above named Mark Williamson and acknowledged the foregoing instrument to be his/her free act and deed, before me, this 4th day of October, 2001.

Ann Sherry
Notary Public (ANN SHERRY)

My commission expires: 4/19/07

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Laura A. Rudolph-Owen

State of Massachusetts)
)ss
County of)

Then personally appeared the above named Laura A. Rudolph-Owen and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Ruth Gimeno

State of Massachusetts)
)ss
County of)

Then personally appeared the above named Ruth Gimeno and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____

ASSIGNMENT

L. RUDOLPH-OWEN
PI 2000-079 PIRICP2

We, Rachel Meyers of Newton, MA, William James Cook of Natick, MA, Mark Williamson of Saugus, MA, Laura A. Rudolph-Owen of Jamaica Plain, MA, and Ruth Gimeno of Boston, MA, in consideration of One Dollar and other valuable consideration paid to us by

Millennium Pharmaceuticals, Inc.

a corporation of Delaware, having its principal place of business at 75 Sidney Street, Cambridge, MA, 02139, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

Millennium Pharmaceuticals, Inc.

its successors and assigns, the entire interest for the United States of America and all foreign countries including all rights of priority under the International Convention for the Protection of Industrial Property in a certain invention or improvement in

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THEREFOR

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And we do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said corporation, its successors and assigns.

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Rachel Meyers

State of Massachusetts)
)ss
County of)

Then personally appeared the above named Rachel Meyers and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
William James Cook

State of Massachusetts)
)ss
County of)

Then personally appeared the above named William James Cook and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Mark Williamson

State of Massachusetts)
)ss
County of)

Then personally appeared the above named Mark Williamson and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____

WITNESS my hand and seal this 3rd day of October, 2001.

By: X *Laura Rudolph Owen*
Laura A. Rudolph-Owen

State of Massachusetts)
)ss
County of Middlesex)

Then personally appeared the above named Laura A. Rudolph-Owen and acknowledged the foregoing instrument to be his/her free act and deed, before me, this 3rd day of October, 2001.

Ann Sherry
Notary Public (ANN SHERRY)
My commission expires: 4/19/07

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Ruth Gimeno

State of Massachusetts)
)ss
County of _____)

Then personally appeared the above named Ruth Gimeno and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public
My commission expires: _____

ASSIGNMENT

R.G.H. 20 MP12000-079 PIRICP2

We, Rachel Meyers of Newton, MA, William James Cook of Natick, MA, Mark Williamson of Saugus, MA, Laura A. Rudolph-Owen of Jamaica Plain, MA, and Ruth Gimeno of ~~Boston~~ ^{Wellesley} MA, in consideration of One Dollar and other valuable consideration paid to us by 25/01/01

Millennium Pharmaceuticals, Inc.

a corporation of Delaware, having its principal place of business at 75 Sidney Street, Cambridge, MA, 02139, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

Millennium Pharmaceuticals, Inc.

its successors and assigns, the entire interest for the United States of America and all foreign countries including all rights of priority under the International Convention for the Protection of Industrial Property in a certain invention or improvement in

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And we do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said corporation, its successors and assigns.

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Rachel Meyers

State of Massachusetts)
)ss
County of)

Then personally appeared the above named Rachel Meyers and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
William James Cook

State of Massachusetts)
)ss
County of)

Then personally appeared the above named William James Cook and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Mark Williamson

State of Massachusetts)
)ss
County of)

Then personally appeared the above named Mark Williamson and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Laura A. Rudolph-Owen

State of Massachusetts)
)ss
County of)

Then personally appeared the above named Laura A. Rudolph-Owen and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____

WITNESS my hand and seal this 3rd day of October, 2001.

By: x Ruth Gimeno
Ruth Gimeno

State of Massachusetts)
)ss
County of Middlesex)

Then personally appeared the above named Ruth Gimeno and acknowledged the foregoing instrument to be his/her free act and deed, before me, this 3rd day of October, 2001.

Ann Sherry
Notary Public (ANN SHERRY)

My commission expires: 4/19/07

ASSIGNMENT

W.J. Cook
HPI 2000-079 PIRCP2

Handover WJC

We, Rachel Meyers of Newton, MA, William James Cook of ~~New London~~, NH, Mark Williamson of Saugus, MA, Laura A. Rudolph-Owen of Jamaica Plain, MA, and Ruth Gimeno of Boston, MA, in consideration of One Dollar and other valuable consideration paid to us by

Millennium Pharmaceuticals, Inc.

a corporation of Delaware, having its principal place of business at 75 Sidney Street, Cambridge, MA, 02139, the receipt of which is hereby acknowledged, do hereby sell, assign and transfer unto said

Millennium Pharmaceuticals, Inc.

its successors and assigns, the entire interest for the United States of America and all foreign countries including all rights of priority under the International Convention for the Protection of Industrial Property in a certain invention or improvement in

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And we do hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said corporation, its successors and assigns.

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Rachel Meyers

State of Massachusetts)
)ss
County of)

Then personally appeared the above named Rachel Meyers and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____

WITNESS my hand and seal this 4 day of January, ²⁰⁰²~~2001~~.

By: x William James Cook
William James Cook

Massachusetts
State of ~~New Hampshire~~)
County of Middlesex) s.s.

Then personally appeared the above named William James Cook and acknowledged the foregoing ^{AS}
instrument to be his/her free act and deed, before me, this 4th day of January, ~~2001~~ ²⁰⁰².

Ann Sherry
Notary Public (ANN SHERRY)

My commission expires: 4/19/07

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Mark Williamson

State of Massachusetts)
County of _____) ss

Then personally appeared the above named Mark Williamson and acknowledged the foregoing
instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Laura A. Rudolph-Owen

State of Massachusetts)
)ss
County of)

Then personally appeared the above named Laura A. Rudolph-Owen and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____

WITNESS my hand and seal this _____ day of _____, 2001.

By: _____
Ruth Gimeno

State of Massachusetts)
)ss
County of)

Then personally appeared the above named Ruth Gimeno and acknowledged the foregoing instrument to be his/her free act and deed, before me, this _____ day of _____, 2001.

Notary Public

My commission expires: _____